1903MNRAS..63..271.

## PAPERS READ BEFORE THE SOCIETY FROM MARCH 1902 TO JANUARY 1903.

1902.

Mar. 14. Note on the "green flash." T. W. Backhouse.

The flash spectrum, Sumatra eclipse, 1901. S. A. Mitchell.

Micrometrical and visual observations of Nova *Cygni* (1876) made with the 40-inch refractor of the Yerkes Observatory. E. E. Barnard.

Anomalous occultations of stars by the Moon. G. W. Hough.

The duration of totality at Navalmoral. C. T. Whitmell.

Note on Professor Turner's recent paper on photographic surveying. H. G. Fourcade.

The magnitude of $\eta$ *Argûs*, 1900–1902. R. T. A. Innes.

On the variation of *S Carinæ*. A. W. Roberts.

Σ 484 and Σ 485, and two pairs. Rev. T. E. Espin.

Double star observations, 1899–1901. W. H. Maw.

New variable stars found during the measurements for the Astrographic Catalogue at the Royal Observatory, Greenwich. Communicated by the Astronomer Royal.

Results of micrometer measures of double stars made with the 28-inch refractor at the Royal Observatory, Greenwich, in the year 1901. Communicated by the Astronomer Royal.

On periodic orbits in the restricted problem of three bodies. E. T. Whittaker.

Mean areas and heliographic latitudes of Sun-spots in the year 1901, deduced from photographs taken at the Royal Observatory, Greenwich, at Dehra Dûn (India), and in Mauritius. Communicated by the Astronomer Royal.

The parallax and proper motion of Nova *Persei*, from photographs taken at the Royal Observatory, Greenwich. Communicated by the Astronomer Royal.

On the images formed by a parabolic mirror. First paper: the geometrical theory. H. C. Plummer.

Apr. 11. Cape double star results, 1901. R. T. A. Innes. Communicated by H.M. Astronomer.

1903MNRAS..63..271.

1902.

Apr. 11. Notes on nebulæ observed at the Royal Observatory, Cape of Good Hope, by J. Lunt and R. T. A. Innes. Communicated by H.M. Astronomer.

Tables of $\frac{1}{2}(\theta + \cos\theta)$, with explanation of use. W. S. Aldis.

On stationary meteor radiants: third paper. H. H. Turner.

Results of double star measures with the 8-inch equatorial at Windsor, New South Wales, in 1901. John Tebbutt.

Note on the green flash at sunset. Major E. H. Hills.

*Saturn* seen through the Cassini division. C. T. Whitmell.

On the probable motion of some of the small stars in the Dumb-bell Nebula. E. E. Barnard.

On the supposed variability of $\kappa$ *Persei* and 36 *Persei*, and a comparison of the photographic and visual magnitudes of those stars. W. H. Robinson.

On the relative number of star images photographed on different parts of a plate, and on the performance of various object-glasses in this respect. H. H. Turner.

May 9. Jacobi's Nome ($q$) in astronomical formulæ, with numerical tables. R. T. A. Innes.

Series in the nebular spectrum, and in the bright-line spectrum of Nova *Persei*. E. F. J. Love.

The spectrum of Nova *Persei*, 1901, on and after September 5. Rev. W. Sidgreaves.

Visual and spectroscopic observations of the Sun-spot group of 1901 May 19–June 26. Rev. A. L. Cortie.

Reduction of extra-meridian observations of planets. P. H. Cowell.

Measures of double stars with the $17\frac{1}{4}$-inch reflector. Rev. T. E. Espin.

On the accuracy of photographic measures. Second note. H. C. Plummer.

June 13. Discovery of Comet Brooks, 1902. W. R. Brooks.

Observations of *Jupiter* made at Mr. E. Crossley's Observatory, Bermerside, Halifax, during the months of July, August, and September 1901. J. Gledhill.

Further observations of the new star in *Perseus*. A. Stanley Williams.

A dark reticle. C. S. Howe.

On the distribution of the stars in the Cape Photographic Durchmusterung. A. M. W. Downing.

Observations of the total eclipse of the Moon, 1902 April 22, at Perth Observatory, Western Australia. W. E. Cooke.

Ephemeris for physical observations of *Mars*, 1902–3. A. C. D. Crommelin.

1903MNRAS..63..271.

1902.

June 13. Reductions of photographs of Swift's Comet (*a* 1899) taken at Cambridge Observatory with a portrait lens. L. N. G. Filon.

On the principle of the arithmetic mean. H. C. Plummer.

Observations of Nova *Persei*. T. W. Backhouse.

Comparison of Groombridge's and Struve's right ascensions of close circumpolar stars. W. G. Thackeray.

Experimental reduction of photographs of *Eros* for the determination of the solar parallax. Second paper : Combination of results from Mount Hamilton, Minneapolis and Cambridge. A. R. Hinks.

Further observations of the new star in *Perseus* made at the Radcliffe Observatory, Oxford. Communicated by the Radcliffe Observer.

Nov. 14. On the mean distance of a planet, as a function of three heliocentric distances and the observed times. Shin Hirayama.

On the general solution of Laplace's equation and the equation of wave motions, and on an undulatory explanation of gravity. E. T. Whittaker.

Observations of Comet Tempel$_2$ (1899 IV.) made at the Radcliffe Observatory, Oxford. Communicated by the Radcliffe Observer.

Observations of *Saturn*, 1900 July 17, made at Perth Observatory, Western Australia. Communicated by W. E. Cooke.

Old Cape records of Comets. Communicated by R. T. A. Innes.

On Mr. Love's formula for the wave-lengths of nebular lines. W. H. Wright.

On the place of a star near the variable *RU Herculis*. F. A. Bellamy.

Another form of micrometer for measuring star positions on photographic plates. H. C. Russell.

Observations of the satellite of *Neptune* from photographs taken at the Royal Observatory, Greenwich, from 1902 January 6 to April 10. Communicated by the Astronomer Royal.

Ephemeris for physical observations of the Moon for 1903. A. C. D. Crommelin.

Stereoscopic pictures of Perrine's Comet. Max Wolf.

Sur la précision des mesures photographiques. Réponse à deux notes de M. H. C. Plummer. M. Lœwy.

On the images formed by a parabolic mirror. Second paper : Influence on the measurement and reduction of a photograph. H. C. Plummer.

1903MNRAS..63..271.

1902.

Nov. 14. Sir W. Herschel's observed nebulous regions, 52 in number, compared with Isaac Roberts's photographs of the same regions taken simultaneously with the 20-inch reflector and the 5-inch Cooke lens. Isaac Roberts.

Newcomb's Fundamental Catalogue : notes and errata. W. G. Thackeray.

On a suggestion made by Sir David Gill that the brighter stars are as a whole rotating with respect to the fainter stars as a whole. H. H. Turner.

Note on photographs of Comet *b* 1902 Perrine, taken at the Royal Observatory, Greenwich. Communicated by the Astronomer Royal.

Note on a comparison of Groombridge's Catalogue (1810) with the Greenwich Second Ten-year Catalogue (1890), with reference to the question of an apparent rotation of the brighter stars as a whole with respect to the fainter stars. Communicated by the Astronomer Royal.

Expedition for ascertaining the best location for Observatories. Percival Lowell.

A standard scale for telescopic observations. Percival Lowell.

Dec. 12. On the accuracy of photographic measures. Third note : Reply to M. Loewy. H. C. Plummer.

Ephemeris for physical observations of *Jupiter*, 1903–4. A. C. D. Crommelin.

Cape double star results, 1902, by R. T. A. Innes. Communicated by H.M. Astronomer.

On Jacobi's method of facilitating the numerical solution of equations arising in the theory of secular perturbations. H. C. Plummer.

Note on binding together réseaux and plates. J. A. Hardcastle.

Cometary observations made at the Liverpool Observatory. W. E. Plummer.

Some developments in terms of the Mean Anomaly. R. T. A. Innes.

Note relating to the preservation of negatives. F. A. Bellamy.

Photographic and visual magnitudes of $\alpha$ *Orionis.* W. H. Robinson.

1903.

Jan. 9. Preliminary note on the possible existence of two independent stellar systems. F. A. Bellamy and H. H. Turner.

New double stars detected with the $17\frac{1}{4}$-inch reflector during the year 1902. Rev. T. E. Espin.

1903MNRAS..63..271.

1903.
Jan. 9. On the Sun's stellar magnitude and the parallax of binary stars. J. E. Gore.

A graphical method of applying to photographic measures the terms of the second order in the differential refraction. A. R. Hinks.

Note on plate constants. F. W. Dyson.

Note on the use of Mr. Aldis's Tables of the function $\frac{1}{2}(\theta + \cos\theta)$ in determining the elements of an orbit. H. C. Plummer.

Note on photographs of Comet *d* 1902 Giacobini, taken at the Royal Observatory, Greenwich. Communicated by the Astronomer Royal.

Statistics of stars in a zone of 5° from +65° to +70° Decl., counted on photographs for the Astrographic Chart and Catalogue at the Royal Observatory, Greenwich. Communicated by the Astronomer Royal.

Note on the reproduction and publication of the photographs for the Astrographic Chart taken at the Royal Observatory, Greenwich. Communicated by the Astronomer Royal.

Observations of occultations of stars by the Moon made at the Royal Observatory, Greenwich, in the year 1902. Communicated by the Astronomer Royal.

1903MNRAS..63..271.

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